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| 06/644,155 | 08/27/84 | NILSSSEN | O |

OLE K. NILSSSEN
CAESAR DRIVE, RR-5
BARRINGTON, IL 60010

| EXAMINER | |
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| BEHA-W | |
| ART UNIT | PAPER NUMBER |
| 212 | 37 |

DATE MAILED:

07/16/85

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined Responsive to communication filed on 4-22-85 This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892. 2. Notice re Patent Drawing, PTO-948.
3. Notice of Art Cited by Applicant, PTO-1449. 4. Notice of informal Patent Application, Form PTO-152
5. Information on How to Effect Drawing Changes, PTO-1474 6. Examiner's Date and Summary Sheet,

Part II SUMMARY OF ACTION

1. Claims 118, 120-122, 124, 125 & 127-129 are pending in the application.

Of the above, claims 118, 120-122, 124 + 125 are withdrawn from consideration.

2. Claims _____ have been cancelled.

3. Claims _____ are allowed.

4. Claims 127 - 129 are rejected.

5. Claims _____ are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8. Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. These drawings are acceptable;
 not acceptable (see explanation).

10. The proposed drawing correction and/or the proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner. disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed _____, has been approved. disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.

12. Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has been received not been received

been filed in parent application, serial no. _____; filed on _____.

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

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In accordance with the attached Examiner Interview Record, claims 118, 120, 121, 122, and 124 are withdrawn from consideration, applicant reserving the right to file a continuing application including said claims. Applicant is requested to cancel these claims in responding to this Office action.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title should emphasize the novelty of the remaining claims.

Claims 127-129 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In essence the claims are misdescriptive and confusing. As to the preambles of claims 127 and 128, as well as to the second and third last lines of claim 129, it is misdescriptive to claim "a substantially sinusoidal AC voltage across a pair of [inverter] output terminals" when the disclosure only supports a trapezoidal voltage across inverter output terminals 9Fig. 2 point M to ground point 37; and Fig. 3A). Compare also the conflicting recitation of a "substantially trapezoidal waveshape" across said terminals, as earlier recited in claim 122, line 4. Thus, there is no support for claiming "a substantially sinusoidal AC voltage across a pair of [inverter] output terminals", and consequently this recitation should be changed.

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With further reference to claims 127 and 128, the phrase covering the last three lines is misdescriptive or at best confusing. During the prosecution of these and similar claims in the past, applicant has taken pains to clearly distinguish the inverter frequency determined by the saturable core from the resonant frequency of the LC circuit. It is therefore inconsistent with applicant's earlier positions and also misdescriptive or at best confusing to now claim that the inverter frequency is somehow "co-determined" by the combined saturable inductor and the resonant circuit. This confusion should be resolved by clearly claiming the operative relationships of the saturable inductor and the resonant circuit by means of structure.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 129 is rejected under 35 U.S.C. 102(b) as being anticipated by Figure 6 of Pintell or fig. 1 of Locklair.

With reference to pertinent features of claim 129, figure 6 of Pintell shows a pair of output terminals

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across secondary winding 612, series resonant LC circuit 616, 617 and positive feedback means comprising saturable transformer 620. The inverter frequency determined by saturable transformer 620 is approximately equal to the natural resonance frequency of the series LC circuit (column 5, lines 15-20).

As to Locklair, reference is made to the last Office action for what the reference shows. As to applicant's Remarks filed April 22, 1985, page 10, it suffices to say that applicant's inverter also provides a squarewave output voltage (fig. 3A).

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 127 and 128 are rejected under 35 U.S.C. 103 as being unpatentable over Pintell in view of Walker.

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As explained above, Pintell discloses a self-oscillating inverter as recited, but connects a load in series with the resonance circuit. In contrast, the claims call ^{for} load "connect means" in parallel with at one component of the resonance circuit (claim 127), that component being a capacitor (claim 128).

But in the lamp art it is common to connect the lamp load across the capacitor of an output series resonant circuit; see figures 1, 5 and 6 of Walker. To so provide Pintell would have been obvious where a lamp load was either required or desired.

Claim 129 is rejected under 35 U.S.C. 102(b) as being anticipated by fig. 2 of Corry.

figure 2 of the reference meets all of the broad limitations of the claims.

As demonstrated by the cited art, the claims are simply too broad to define over seemingly different self-oscillating inverters from those disclosed by applicant's figures 2 and 7. Note, for example that none of claims 127-129 even recite the type of inverter (e.g. half-bridge, double-ended, etc.) or the type of switch (transistor) used in the inverter. Nor do the claims specify the load current feedback aspect between the inverter frequency-setting saturable inductor and the resonant circuit (which in claims 128 and 129 need not even be series-connected). Then too a significant feature ~~is~~ ⁱⁿ the quarter cycle conduction of transistors 42 and 43 in relation to the frequency of the LC circuit

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as shown in figures 3B and 3D, which is also not claimed.

It appears to the examiner that allowable subject matter exists if it were claimed by adding at least the features mentioned above. Thus, claims amended to contain all limitations set forth above will be given favorable consideration in the next Office action.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy set forth in 37 CFR 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CFR 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication should be directed to William H. Beha at telephone number 703-557-5052.

Beha/dmm

7/12/85

William H. Beha

WILLIAM H. BEHA, JR.
SENIOR EXAMINER
GROUP ART UNIT 212